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(a) bleaching the chemical cellulose pulp in a first chlorine dioxide step at a temperature over 70 °C for less than 10 minutes and so as to provide a chlorine dioxide dosage of between about 0.5-1.5 % active chlorine, and adjusting the pH of the pulp in the first chlorine dioxide step so that the final pH of the step is over 4; and then

(b) effecting an acid treatment of the chemical cellulose pulp at a pH of between 2 - 5 and at a temperature of over 80°C for 30 - 300 minutes.

*bcd* 35. (Amended) A method of treating chemical cellulose pulp from an alkaline pulping process with chlorine dioxide in a first chlorine dioxide stage of an elemental chlorine free bleaching sequence, comprising:

*b2*

(a) bleaching the chemical cellulose pulp in a first chlorine dioxide step so that the final pH of the step is over 5, and so that hexenuronic acid groups in the pulp substantially do not react with chlorine dioxide, and for a treatment time of between 30 seconds-three minutes; and then

(b) acid treating the chemical cellulose pulp at a pH of between 2 - 5 and at a temperature of over 80°C for 30-300 minutes.

*b3* 39. (Amended) A method of treating chemical cellulose pulp from an alkaline pulping process with chlorine dioxide in a first chlorine dioxide stage of an elemental chlorine free bleaching sequence, comprising:

*b3*

(a) bleaching the chemical cellulose pulp in a first chlorine dioxide step, and adjusting the pH of the pulp in the first chlorine dioxide step so that the final pH of the step is over 4, and then

(b) acid treating the chemical cellulose pulp at a pH of between 2 - 5 and at a temperature of over 80°C for 30-300 minutes, and

(c) after (b) bleaching the chemical cellulose pulp in a second chlorine dioxide step; and

wherein (a) is further practiced so as to provide a chlorine dioxide dosage of between about 0.1-1.0% active chlorine during the first chlorine